

PATENT COOPERATION TREATY



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/KR2003/000416	International filing date (day/month/year) 04 MARCH 2003 (04.03.2003)	Priority date (day/month/year) 03 APRIL 2002 (03.04.2002)
International Patent Classification (IPC) or national classification and IPC IPC7 F25D 23/02		
Applicant LG ELECTRONICS INC. et al		

1.	This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2.	This REPORT consists of a total of <u>4</u> sheets, including this cover sheet. <input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of _____ sheets.
3.	This report contains indications relating to the following items: I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand 31 OCTOBER 2003 (31.10.2003)	Date of completion of this report 23 JULY 2004 (23.07.2004)
Name and mailing address of the IPEA/KR  Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer KIM, Eun Rae Telephone No. 82-42-481-5458 

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/KR2003/000416

1. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☐ the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the claims:
 pages _____, as originally filed
 pages _____, as amended (together with any statement) under Article 19
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the drawings:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language English which is

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☒ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheet _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed." and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION

International application No.

PCT/KR2003/000416

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims	1-22	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	2-15, 17, 18, 20	YES
	Claims	1, 16, 19, 21, 22	NO
Industrial applicability (IA)	Claims	1-22	YES
	Claims	NONE	NO

2. Citations and explanations (Rule 70.7)

Cited Document:

D1: KR 213143 B (02 August 1999)

Claim 1 relates to a door apparatus for a drawer-type refrigerator, comprising a door, a frame disposed on a rear side of the door, a rotating means for leading the door to rotate at a predetermined angle with respect to the frame, and a rotation limiting means for selectively limiting the rotation of the door.

D1 relates to a drawer for a refrigerator, comprising an opening provided on a front side thereof, an opening/closing member provided on said opening for being capable of rotating at a predetermined angle, and a limiting means for limiting the rotational angle by guiding the rotation of the opening/closing member.

Claim 1 is different from D1 only in the addition of a function of selectively limiting the rotation of a door, and is the same as D1 in the other components. Accordingly, a person skilled in the art would have had no technical difficulty arriving at the door apparatus for a refrigerator as claimed in claim 1.

Claim 16 defines the rotation limiting means of claim 1, which is a connection link including a plurality of links. The use of a connection link for a door which rotates at a certain angle is a well-known technology, as seen in the hom bar door(auxiliary door) of a refrigerator. Accordingly, a person skilled in the art would have had no technical difficulty applying said well-known technology to a door apparatus for a refrigerator and arriving at the invention as claimed in claim 16.

Claim 19 relates to a door apparatus for a drawer for a drawer-type refrigerator which can be put in and taken out, comprising: a door; a frame; and hinge units, each of which includes a plurality of links and exerts an elastic force so as to connect the door to a front end of the frame and lead the door to rotate at a predetermined angle with respect to the frame. The rotation of a door by a plurality of links is a well-known technology, and the technology for providing an elastic force to a hinge unit is already disclosed in D1.

(Continued on Supplemental Sheet.)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/KR2003/000416

Supplemental Box
(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of:

Box V.

Claims 21 and 22 add a shock-absorbing means between a rear face of the door and a front end of the frame for absorbing an impact generated when the door comes into close contact with the frame. Such a means is disclosed in D1.

Therefore, claims 1, 16, 19, 21 and 22 are considered to lack an inventive step under PCT Article 33(3).

No documents cited in the International Search Report, taken alone, teach the door apparatus for a drawer-type refrigerator comprising
comprising a door, a frame disposed in the rear of the door, a rotating means for causing the door to rotate at a predetermined angle with respect to the frame, and a rotation limiting means for selectively limiting the rotation of the door, as set forth in the present claims 1-22. Therefore, claims 1-22 are considered to be novel under PCT Article 33(2).

Since claims 1-22 relate to a door apparatus for a drawer-type refrigerator, the subject matter of claims 1-22 is considered to be industrially applicable under PCT Article 33(4).